GANGRENE FOLLOWING PUERPERAL THROMBOPHLEBITIS

by

S. PREM CHANDRA, F.R.C.S. (Eng. & Edin.), D.R.C.O.G. (Lond.)

and

A. N. GUPTA, M.D. (Mad.), D.G.O. (Mad.)

Though the history of thrombophlebitis (white leg of puerperium) must be as old as the history of childbirth, yet gangrene of the lower extremity appears to be a rare one. This report includes case histories of 3 cases of gangrene which were encountered in 35 cases of puerperal thrombophlebitis admitted in our department since 1956. The spectacular fall in the post-partum and post-operative complications of an infective nature due to the introduction of antibiotics, early mobilisation in the post-operative period and the puerperium, and better operative techniques have all reduced the incidence of thrombophlebitis and phlebothrombosis. Technically speaking therefore the incidence of gangrene of a part of lower extremity as a complication of thrombophlebitis should have been higher in the earlier periods, but on searching the available literature one was not able to find much of a mention about this complication except that Oschner and DeBakey (1943), in their paper, mention the possible pathogenesis about the complication.

Case Report I: C. R., No. 2905, aged 25 years, was admitted on 20-3-61 with the complaint of pain and swelling of both lower extremities of 10 days' duration and fever of 15 days' duration, fallowing a full-term normal delivery 3 weeks prior to the onset of the above complaint. The right lower extremity was involved 5 days before the left. The left foot, according to her, was black and she was unable to move the toes for 4 days prior to admission. She was gravida and para IV with no previous history of puerperal thrombophlebitis. Patient on examination was grossly anaemic (Hb. 3.5gm.%), toxic, rolling with pain and running a temperature of 102.4 F°, pulse 129; blood pressure 120/80 mm. Hg., heart and lungs were normal except for a haemic murmur in the pulmonary area. The right leg was oedematous below the knee, warm and slightly tender. The left lower limb was oedematous from foot to groin including labium majus on that side. The left was also blue, cold and senseless below its lower 1/3. Movements of the toes were absent and no arterial pulsations of dorsalis pedis or posterior tibial were felt.

Though the case appeared to be that of well-established gangrene yet the conservative methods, including bed rest, raising of the part, antibiotics, and blood transfusions were given. Paravertebral block was tried (48 hours) after admission and the skin temperatures were recorded. There was a difference of 10°C between the temperature of right and left dorsum of foot before the block. The improvement was neglibigle (i.e. 0.5 to 1.2°C) on the affected side. The gangrenous part never showed any improvement and amputation of the leg was advised by the surgical specialist

Department of Obstetrics & Gynaecology, Medical College, Patiala, India.

but was refused by the patient. Patient left against medical advice on 22-4-1961.

Case II: Patient 35 years, C. R. No. 20640, was admitted on 18-1-1962. She was gravida and para II, having delivered the last child a month ago. The present complaint of swelling and pain of the left leg was of 4 days' duration. The onset in this case was with sudden pain in the left leg and swelling and discoloration of the part was only of 30 hours' duration. On examination she was anaemic (7.5 gm.%-Hb.) temperature 99.5 F°, pulse 80/mt., blood pressure 130/90 and urine normal. The heart and lungs were normal on examination. Bimanual pelvic examination showed a well involuted uterus and clear fornices. On local examination there was left femoral venous thrombophlebitis and the left foot and leg showed a threatening gangrene. Patient was put on antibiotics, vasodilator drugs (Priscol) and paravertebral block daily. On 22-1-62, the gangrene became well established and the patient could not move her toes and foot on that side. Anti-coagulants were also given keeping a check on prothrombin time. Patient was transferred to the surgical side and amputation was done above the knee at the seat of election.

Case III: Patient, C.R. No. 27815, aged 22 years, gravida and para one, was admitted on 25-5-1962, with a history of pain and swelling of the left leg of five days' duration and slight fever of five days' duration following an absolutely natural delivery 23 days prior to admission. The onset was gradual. On examination she was anaemic (6 Gm.%Hb.) Urine normal and had a temperature of 102° and blood pressure 115/70. There was nothing abnormal on examination of the chest. On local examination the whole of the left lower extremity was swollen. The toes were blue. Sensations were diminished but movements were normal. Again the gangrene was threatened. The same conservative treatment i.e. paravertebral block (4 days), blood transfusion, antibiotics and anticoagulants were tried. The gangrene became limited to that of toes and the dorsalis pedis and posterior tibial pulsations were felt well on 9-6-1962. On 14-6-62 the line of demarcation appeared at the meta-tarso-phalyngeal joints of the lateral 3 toes and 1st inter-phalyngeal joints of the 2nd and big toe i.e. dry gangrene became established. Patient was advised amputation by the orthopaedic surgeon which was done.

Discussion

The possible pathogenesis of this condition as shown by Oschner and DeBakey (1943) is that as a result of venous blockage, there is reflex spasm throughout the vascular tree of the involved extremity.

Gross anaemia was an important additional factor in all these three cases, haemoglobin percentage being less than 50%. Anaemia in addition to being a predisposing factor to puerperal sepsis and puerperal thrombophlebitis, must add to the anoxic death of the tissue produced by vasospasm in these cases. Therefore, immediate treatment in these cases included blood transfusion in addition to paravertebral block. But both these mechanisms cannot be expected to reverse an already established gangrene. When the gangrene is established amputation has to be done, which was done in two of the cases, the third having refused this treatment. In none of these cases was there any evidence of any defect in the heart so as to suggest an embolism being the cause of gangrene nor any other cause could be found in the rest of the body which could have led to this condition.

Summary and Conclusions

1. Three cases of gangrene resulting from puerperal thrombophlebitis are presented.
2. Gangrene in puerperal thrombophlebitis is a rare complication and

therefore there are not many cases in literature.

3. The possible pathogenesis is due to reflex spasm of arteries and one additional factor which may be responsible in these cases here is the anaemia which was present in all these cases and delay in seeking medical advice.

4. Para-vertebral block did help to the extent of limiting the gangrene in these cases.

5. The complication appears to be the result of inadequate antenatal and intranatal care, as all these were admitted from rural areas as emergency cases.

References

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